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This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1 Claim 1 (original): A method of providing search results
- 2 in response to an ambiguous search query, the ambiguous
- 3 search query consisting of a sequence of ambiguous
- 4 information components:
- 5 receiving a sequence of ambiguous information
- 6 components from a user;
- 7 obtaining mapping information that maps the
- 8 ambiguous information components to less ambiguous
- 9 information components;
- 10 using the mapping information to translate the
- 11 sequence of ambiguous information components into one or
- 12 more corresponding sequences of less ambiguous
- 13 information components;
- providing one or more of the sequences of less
- 15 ambiguous information as an input to a search engine;
- obtaining search results from the search engine; and
- presenting the search results to the user.
- 1 Claim 2 (original): The method of claim 1, wherein the
- 2 mapping information is based on the configuration of a
- 3 standard telephone keypad.
- 1 Claim 3 (original): The method of claim 2, wherein the
- 2 ambiguous information components comprise numbers and the
- 3 less ambiguous information components comprise letters.
- 1 Claim 4 (original): The method of claim 1, wherein each
- 2 of the ambiguous information components comprise a single

- 3 press of a key and the less ambiguous information
- 4 comprises letters that correspond to the key.
- 1 Claim 5 (original): The method of claim 1, wherein the
- 2 ambiguous information components comprise phonemes.
- 1 Claim 6 (original): The method of claim 5, wherein the
- 2 less ambiguous information components comprise
- 3 alphanumeric information.
- 1 Claim 7 (original): The method of claim 1, wherein the
- 2 ambiguous information components comprise visual
- 3 information.
- 1 Claim 8 (original): The method of claim 1, wherein the
- 2 act of using comprises using the mapping information in
- 3 combination with a lexicon to translate the sequence of
- 4 ambiguous information components into one or more
- 5 corresponding sequences of less ambiguous information
- 6 components.
- 1 Claim 9 (original): The method of claim 8, wherein the
- 2 lexicon is a dictionary.
- 1 Claim 10 (original): The method of claim 8, wherein the
- 2 lexicon is a list of sequences of less ambiguous
- 3 information components that previously have been
- 4 processed by the search engine.
- 1 Claim 11 (original): The method of claim 1, wherein the
- 2 act of providing comprises providing at least two

- 3 sequences of less ambiguous information components to the
- 4 search engine using a logical "OR" operation.
- 1 Claim 12 (original): The method of claim 11, wherein the
- 2 act of providing comprises:
- 3 determining a subset of the translated sequences of
- 4 less ambiguous information components; and
- 5 providing the subset of translated sequences of less
- 6 ambiguous information components as an input to a search
- 7 engine.
- 1 Claim 13 (original): The method of claim 12, wherein the
- 2 act of determining comprises comparing the translated
- 3 sequences of less ambiguous information components
- 4 against a lexicon.
- 1 Claim 14 (original): The method of claim 12, wherein the
- 2 act of determining comprises comparing the translated
- 3 sequences of less ambiguous information components
- 4 against a search query log.
- 1 Claim 15 (original): The method of claim 12, wherein the
- 2 act of determining comprises using statistical
- 3 information about the co-occurrence of the less ambiguous
- 4 information components within the sequence.
- 1 Claim 16 (original): A method of providing search
- 2 results in response to an ambiguous search query,
- 3 comprising:
- 4 receiving a sequence of information components from
- 5 a user, each information component corresponding to a key
- 6 press;

- 7 obtaining mapping information that maps the
- 8 information components to other information components
- 9 corresponding to the same key press;
- 10 using the mapping information to determine other
- 11 sequences of information components;
- 12 providing one or more of the received sequence and
- 13 the other sequences as an input to a search engine;
- obtaining search results from the search engine; and
- presenting the search results to the user.
 - 1 Claim 17 (original): The method of claim 16, wherein the
 - 2 mapping information is based on the configuration of a
 - 3 standard telephone keypad.
 - 1 Claim 18 (original): The method of claim 17, wherein the
 - 2 received information components comprise numbers and the
 - 3 other information components comprise letters.
 - 1 Claim 19 (original): The method of claim 17, wherein
 - 2 both the received and other information components
 - 3 comprise letters.
 - 1 Claim 20 (original): The method of claim 16, wherein the
 - 2 act of providing comprises providing at least two
 - 3 sequences to the search engine using a logical "OR"
 - 4 operations.
 - 1 Claim 21 (original): A method of providing search
 - 2 results to a user in response to an ambiguous search
 - 3 query, comprising:
 - 4 receiving a string of numbers;

- 5 translating the string of numbers into a plurality
- 6 of letter strings based on mapping information;
- 7 providing at least one of the letter strings as a
- 8 search query to a search engine;
- 9 obtaining search results from the search engine in
- 10 response to the search query; and
- 11 presenting the search results to a user.
 - 1 Claim 22 (original): The method of claim 21, wherein the
 - 2 mapping information is based on a standard telephone
 - 3 keypad.
 - 1 Claim 23 (original): The method of claim 21, wherein the
 - 2 act of providing comprises providing at least two of the
 - 3 letter strings as a search query to a search engine using
 - 4 a logical "OR" operation.
 - 1 Claim 24 (original): A method of providing search
 - 2 results to a user in response to an ambiguous search
 - 3 query, comprising:
 - 4 receiving a number word;
 - 5 translating the number word into one or more letter
 - 6 words based on mapping information;
 - 7 providing at least one of the letter words as a
 - 8 search query to a search engine;
 - 9 obtaining search results from the search engine in
- 10 response to the search query; and
- providing the search results to a user.
 - 1 Claim 25 (original): The method of claim 24, wherein the
 - 2 providing step comprises providing a plurality of the

- 3 letter words as a search query to a search engine using a
- 4 logical "OR" operation.
- 1 Claim 26 (original): A method of providing search
- 2 results to a user in response to an ambiguous search
- 3 query, comprising:
- 4 receiving at least two number words constituting a
- 5 number phrase;
- 6 translating each number word into one or more letter
- 7 words based on mapping information;
- 8 forming one or more letter phrases as a search query
- 9 to a search engine;
- 10 obtaining search results from the search engine in
- 11 response to the search query; and
- 12 providing the search results to a user.
- 1 Claim 27 (original): The method of claim 26, wherein the
- 2 providing step comprises providing at least two of the
- 3 letter phrases as a search query to a search engine using
- 4 a logical "OR" operation.
- 1 Claim 28 (original): The method of claim 26, wherein the
- 2 mapping information is based on a standard telephone
- 3 keypad.
- 1 Claim 29 (original): A method of providing search
- 2 results in response to an ambiguous search query received
- 3 from a client device, the ambiguous search query
- 4 consisting of a sequence of ambiguous information
- 5 components;
- 6 receiving at a server device a sequence of ambiguous
- 7 information components from a client device;

- 8 obtaining at the server device mapping information
- 9 that maps the ambiguous information components to less
- 10 ambiguous information components;
- using the mapping information in combination with a
- 12 dictionary to translate, at the server device, the
- 13 sequence of ambiguous information components into one or
- 14 more corresponding sequences of less ambiguous
- 15 information components.
- 1 Claim 30 (original): A computer-readable medium
- 2 containing one or more instructions for providing search
- 3 results in response to an ambiguous search query, the
- 4 ambiguous search query consisting of a sequence of
- 5 ambiguous information components, the instructions
- 6 comprising:
- 7 receiving a sequence of ambiguous information
- 8 components from a user;
- 9 obtaining mapping information that maps the
- 10 ambiguous information components to less ambiguous
- 11 information components;
- using the mapping information to translate the
- 13 sequence of ambiguous information components into one or
- 14 more corresponding sequences of less ambiguous
- 15 information components;
- 16 providing one or more of the sequences of less
- 17 ambiguous information as an input to a search engine;
- obtaining search results from the search engine; and
- 19 presenting the search results to the user.
 - 1 Claim 31 (original): An apparatus for providing search
 - 2 results in response to an ambiguous search query, the

- 3 ambiguous search query consisting of a sequence of
- 4 ambiguous information components, comprising:
- at least one memory having program instructions; and
- at least one processor configured to execute the
- 7 program instructions to perform the operations of:
- 8 receiving a sequence of ambiguous information
- 9 components from a user;
- 10 obtaining mapping information that maps the
- 11 ambiguous information components to less ambiguous
- 12 information components;
- using the mapping information to translate the
- 14 sequence of ambiguous information components into one or
- 15 more corresponding sequences of less ambiguous
- 16 information components;
- providing one or more of the sequences of less
- 18 ambiguous information as an input to a search engine;
- obtaining search results from the search
- 20 engine; and
- 21 presenting the search results to the user.
 - 1 Claim 32 (original): An apparatus for providing search
 - 2 results in response to an ambiguous search query, the
- 3 ambiguous search query consisting of a sequence of
- 4 ambiguous information components, comprising:
- 5 means for receiving a sequence of ambiguous
- 6 information components from a user;
- 7 means for obtaining mapping information that maps
- 8 the ambiguous information components to less ambiguous
- 9 information components;
- means for using the mapping information to translate
- 11 the sequence of ambiguous information components into one

- 12 or more corresponding sequences of less ambiguous
- 13 information components;
- means for providing one or more of the sequences of
- 15 less ambiguous information as an input to a search
- 16 engine;
- means for obtaining search results from the search
- 18 engine; and
- means for presenting the search results to the user.
- 1 Claim 33 (new): The method of claim 1 wherein the act of
- 2 using the mapping information to translate the sequence
- 3 of ambiguous information components into one or more
- 4 corresponding sequences of less ambiguous information
- 5 components uses the mapping information to directly
- 6 translate the sequence of ambiguous information
- 7 components into one or more corresponding sequences of
- 8 less ambiguous information components.
- 1 Claim 34 (new): The method of claim 1 wherein the
- 2 ambiguous information components are more ambiguous than
- 3 the less ambiguous information components due to a
- 4 limited capability of a user input device.
- 1 Claim 35 (new): The method of claim 1 further comprising
- 2 looking up search results using an index including
- 3 entries, at least one entry including a sequence of less
- 4 ambiguous information components mapped to a set of one
- 5 or more items.